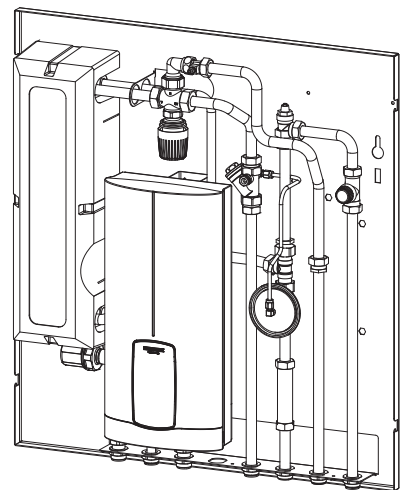


## OPERATION AND INSTALLATION

PROFI SELECT apartment module for DHW and heating with integral instantaneous water heater

- » WSP-2-DUO
- » WSG-2-DUO



## OPERATION

1.	General information	2
1.1	Relevant documents	2
1.2	Safety instructions	2
1.3	Other symbols in this documentation	3
1.4	Information on the appliance	3
1.5	Units of measurement	3
2.	Safety	3
2.1	Intended use	3
2.2	Safety instructions	3
3.	Appliance description	3
4.	Cleaning, care and maintenance	3
5.	Troubleshooting	4

## INSTALLATION

6.	Safety	4
6.1	General safety instructions	4
6.2	Instructions, standards and regulations	4
7.	Appliance description	4
8.	PROFI SELECT modular system	4
8.1	Base station	5
8.2	Installation options	6
8.3	Accessories	8
9.	Preparation	10
9.1	Installation location	10
9.2	Storage	10
9.3	Transport	10
10.	Installation	11
10.1	Appliance installation	11
10.2	Water connection	12
10.3	Electrical connection	12
10.4	Completing the installation	13
11.	Commissioning	13
12.	Settings	14
13.	Appliance handover	14
14.	Maintenance	14
15.	Troubleshooting	14
16.	Specification	15
16.1	Dimensions and connections	15
16.2	Wiring diagrams	18
16.3	Data tables	22

## GUARANTEE

## ENVIRONMENT AND RECYCLING

# OPERATION

## 1. General information

These instructions are intended for qualified contractors.






### Note

Read these instructions carefully before use and keep them available by the appliance.

Pass on the instructions to a new user if required.

### 1.1 Relevant documents

-  Operating and installation instructions for the central heating system
-  Operating and installation instructions for the integral instantaneous water heater
-  Instructions for the installation options used

### 1.2 Safety instructions

#### 1.2.1 Structure of safety instructions






#### KEYWORD Type of risk

Here, possible consequences are listed that may result from failure to observe the safety instructions.

► Steps to prevent the risk are listed.

#### 1.2.2 Symbols, type of risk

Symbol	Type of risk
	Injury
	Electrocution
	Burns (burns, scalding)

#### 1.2.3 Keywords

KEYWORD	Meaning
DANGER	Failure to observe this information will result in serious injury or death.
WARNING	Failure to observe this information may result in serious injury or death.
CAUTION	Failure to observe this information may result in non-serious or minor injury.

### 1.3 Other symbols in this documentation

**Note**

General information is identified by the adjacent symbol.

- ▶ Read these texts carefully.

Symbol	
	Material losses (appliance damage, consequential losses and environmental pollution)
	Appliance disposal

- ▶ This symbol indicates that you have to do something. The action you need to take is described step by step.

### 1.4 Information on the appliance

- ▶ Always observe the information on the appliance and keep it legible.

### 1.5 Units of measurement

**Note**

All measurements are given in mm unless stated otherwise.

## 2. Safety

### 2.1 Intended use

The appliance is intended for decentralised DHW heating and for heating water distribution.

The appliance is intended for domestic use. It can be used safely by untrained persons. The appliance can also be used in a non-domestic environment, e.g. in a small business, as long as it is used in the same way.

Any other use beyond that described shall be deemed inappropriate. Observation of these instructions and of the instructions for any accessories used is also part of the correct use of this appliance.

#### WSP-2-DUO

The threaded heat exchanger is particularly suitable for critical DHW conditions.

### 2.2 Safety instructions

**WARNING Injury**

The appliance may be used by children aged 8 and older and persons with reduced physical, sensory or mental capabilities or a lack of experience and know-how, provided that they are supervised or they have been instructed on how to use the appliance safely and have understood the potential risks. Children must never play with the appliance. Children must never clean the appliance or perform user maintenance unless they are supervised..

**WARNING Burns**

- Hot water or steam may escape.
- There is a risk of scalding at outlet temperatures in excess of 43 °C.
- Pipework and parts of the appliance may become hot.

**Material losses**

In the event of water damage, immediately shut down the appliance.

**Material losses**

The user should protect the system against moisture and frost.

**Material losses**

There is a risk of fire.

- ▶ Do not store any combustible materials near the appliance.

**Note**

Do not cover the air slots in the casing door.

- ▶ Ensure adequate air circulation.

## 3. Appliance description

The appliance provides the required amount of DHW at the preferred temperature at the draw-off points. This occurs within the output limits of the appliance.

The appliance is equipped with an integral instantaneous water heater for reheating DHW as required.

Heating water is distributed to the connected radiators.

## 4. Cleaning, care and maintenance

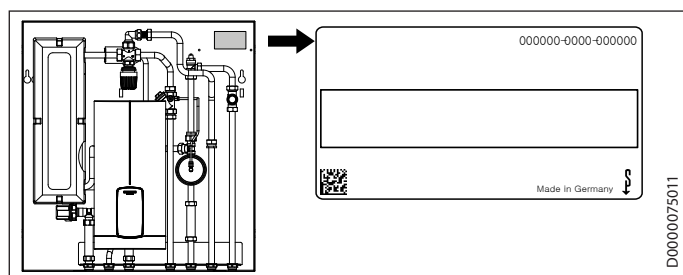
A damp cloth is sufficient for cleaning the casing. Never use abrasive or corrosive cleaning agents.

The heat exchanger requires regular cleaning, depending on water quality. Have the appliance cleaned by a qualified contractor after no more than 2 years. The qualified contractor will then determine the intervals at which it should be cleaned thereafter.

## 5. Troubleshooting

Problem	Cause	Remedy
DHW does not heat up. Radiators do not heat up.	The central pump is not working.	Check whether the central pump is running.
	The heating system is not working.	Check whether the heating system is free from faults.

If you cannot remedy the fault, contact your qualified contractor. To facilitate and speed up your request, provide the number from the type plate (000000-0000-000000).



# INSTALLATION

## 6. Safety

Only a qualified contractor should carry out installation, commissioning, maintenance and repair of the appliance.

### 6.1 General safety instructions

We guarantee trouble-free function and operational reliability only if original accessories and spare parts intended for the appliance are used.

### 6.2 Instructions, standards and regulations



#### Note

Observe all applicable national and regional regulations and instructions.

## 7. Appliance description

### Domestic hot water

For DHW heating, cold water flows to the plate heat exchanger. The "Thermo Fluid System" temperature controller detects the DHW demand. Some of the heating water from the heating water flow is channelled over the heat exchanger to heat the DHW to the required temperature. DHW from the cold water connection is channelled through the heat exchanger and heated as required. DHW flows from the heat exchanger to the "DHW outlet".

The temperature level of the DHW can be further increased by switching on the integral instantaneous water heater. This enables outlet temperatures of up to 60 °C.

A "Cold water outlet" supplies the draw-off points from a cold water distributor inside the appliance.

### Room heating, e.g. radiators

Heating water from the heat generator is distributed by the appliance to the heating circuits via the "Heat source flow" and the dirt filter. The common return to the supply side is through the "Heat source return" with a differential pressure controller. Heating water from the "Heat source flow" is supplied directly via the "Heating flow" to the heating circuit without mixer, e.g. radiators.

The flow temperature can be reduced to a lower temperature level (e.g. for underfloor heating systems) via an optional heating circuit with mixer.

An actuator and room temperature controller available as accessories can be used to centrally interrupt the heating circuit supply once the required room temperature is reached.

## 8. PROFI SELECT modular system

The PROFI SELECT modular system consists of 4 components:

- Base station
- Output modules
- Installation options
- Accessories

### Order code

The order code consists of the base station designation, followed by an "E" and the internal code for the installation options.

Example: Order code "WSP2DUOE-7.1"

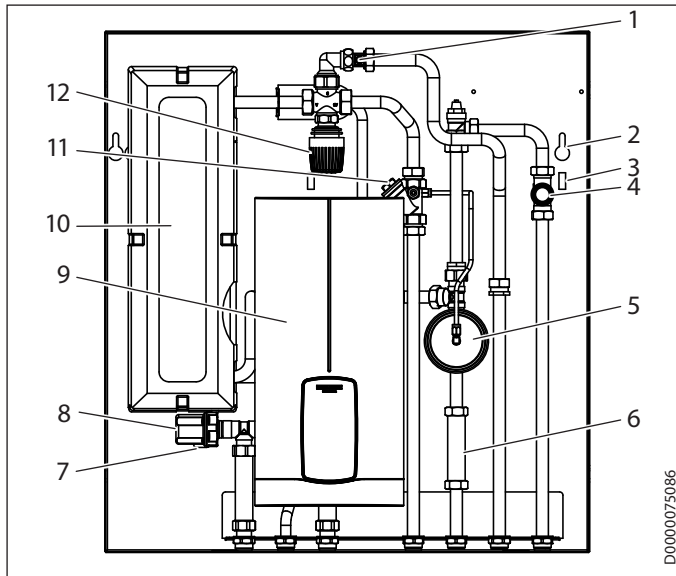
	<b>WSP2DUO</b>	<b>E 7.1</b>
Base station		
Installation options		
E7-WDR1		



### 8.1 Base station

Base stations are fully functional apartment modules which can be further equipped with output modules and installation options.

Designation	Description
WSP-2-DUO	Copper-soldered heat exchanger, integral instantaneous water heater
WSG-2-DUO	Stainless steel-soldered heat exchanger, integral instantaneous water heater



- 1 Air vent screw
- 2 Mounting position on finished walls
- 3 Mounting position on unfinished walls
- 4 Room heating valve
- 5 Differential pressure controller
- 6 Heat meter adaptor
- 7 Equipotential bonding connection
- 8 Pressure surge reducer
- 9 Instantaneous water heater
- 10 Plate heat exchanger
- 11 Dirt filter with strainer
- 12 "Thermo Fluid System" (TFS) temperature controller



**Note**  
There are no output modules available for the WSP-2-DUO and WSG-2-DUO base stations.

#### 8.1.1 Heat meter

Heat meters must be installed in the unit on site.

The base units are equipped with appropriate fittings (110 mm, 3/4" 1.5 m<sup>3</sup>/h) for the heat meters.

Sensor retainer:

- Directly immersed
- Sensor length: 28 mm
- Diameter: Max. 5.4 mm; at the sealing point min. 5.2 mm

#### 8.1.2 Heat exchanger operating conditions

The threaded, stainless steel soldered heat exchanger is particularly suitable for applications where water quality is critical.

Water constituents / characteristic values	Unit	Heat exchanger copper soldered	Heat exchanger stainless steel soldered
pH value		7-9 (taking SI index into account)	6-10
Saturation index SI (delta pH value)		-0.2 < 0 < +0.2	Not specified
Total hardness	°dH	6-15	6-15
Conductivity	µS/cm	10...500	Not specified
Suspended solids	mg/l	< 30	< 30
Chloride	mg/l	Above 100 °C no chlorides permissible	
Free chlorine	mg/l	< 0.5	< 0.5
Hydrogen sulphide	mg/l	< 0.05	Not specified
Ammonia	mg/l	< 2	Not specified
Sulphate	mg/l	< 100	< 400
Hydrogen carbonate	mg/l	< 300	Not specified
Hydrogen carbonate/sulphate	mg/l	> 0.1	Not specified
Sulphide	mg/l	< 1	< 7
Nitrate	mg/l	< 100	Not specified
Nitrite	mg/l	< 0.1	Not specified
Iron, dissolved	mg/l	< 0.2	< 0.2
Manganese	mg/l	< 0.1	Not specified
Free, aggressive carbon dioxide	mg/l	< 20	Not specified



**Note**  
We recommend using a softening system if the total hardness is > 15 °dH.

#### 8.1.3 Thermal overflow valve operating conditions

A thermal overflow valve can be used at the end of the line to increase comfort levels.

Designation	Part number
<b>Overflow valve</b>	
ÜVS	236016



**Note**  
If the simple pipe length (see following table) of the last heat interface unit in the line is not exceeded, a thermal overflow valve is not required.

Required flow temperature [°C]	70	65	60	55
<b>Nominal pipe diameter</b>				
DN 15	21	17	12	7
DN 20	18	15	11	6
DN 25	16	13	9	5
DN 32	14	11	8	5
DN 40	13	10	7	4
DN 50	11	9	7	4

### 8.1.4 TFS temperature controller adjustment options

Scale	TFS temperature controller (control range 30-50 °C)	Notes
1	30	
2	32	
3	34	
4	37	Recommended setting: between positions 4 and 5
5	39	
6	41	
7	43	
8	46	
9	48	
10	50	

### 8.2 Installation options

Installation options are installed in the base station at the factory and cannot be ordered individually.

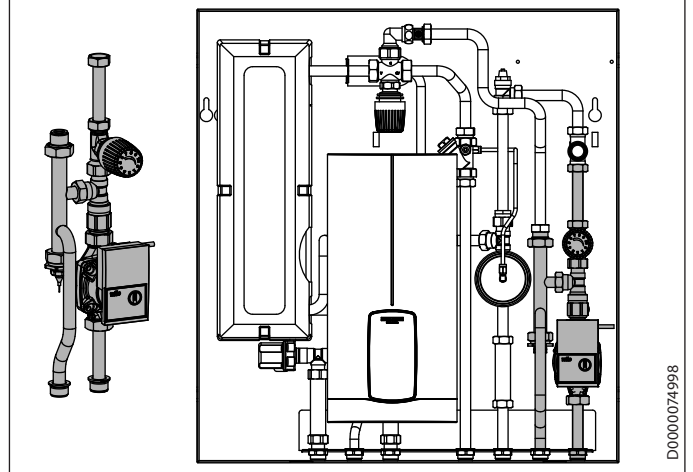
Designation	Internal code	Description
<b>Heating circuit</b>		
E1-HKT	1.1	Heating circuit, thermostatic
E1-HKE	1.2	Heating circuit, electric
E2-HKU	2	Heating circuit without mixer
<b>Pipework thermal insulation</b>		
E7-WDR1	7.1	Pipework thermal insulation
E7-WDR2	7.2	Pipework thermal insulation
<b>Drain set</b>		
E8-ES	8	Drain set
<b>Contact thermostat</b>		
E9-ATR	9	Contact thermostat



**Note** For dimensions and connections as well as the data tables for the installation options, see chapter "Installation / Specification".

### [1.1] Heating circuit with mixer, thermostatically controlled | E1-HKT

Heating circuit with mixer with high efficiency pump including pipework in the base station



The flow temperature is controlled by an injection system using a thermostatic control valve.

Scale	Temperature controller (control range 20-50 °C)
1	20
2	23
3	27
4	30
5	33
6	37
7	40
8	43
9	47
10	50

### Checking / correcting the heating water flow rate

- ▶ Ensure heat supply through the central heat generator. The flow temperature should have reached the design value for the network.
- ▶ Set the temperature controller to the required flow temperature at the control valve.
- ▶ Switch on the pump.
- ▶ Perform hydronic balancing of the underfloor heating circuit at the heating circuit distributor according to the design engineer's specifications.
- ▶ Do not draw off any DHW while testing the heating water flow rate. Make sure that all thermostatic valves and underfloor heating control valves are fully open.
- ▶ After balancing is complete, check the set flow temperature again.

# INSTALLATION

## PROFI SELECT modular system

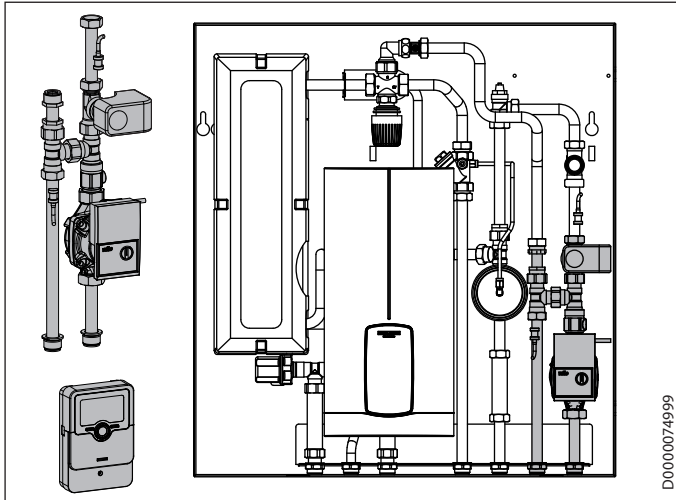


### [1.2] Heating circuit with mixer, electrically controlled | E1-HKE

Incl.

SEHC/SEHCM Control unit operating instructions

Heating circuit with mixer with high efficiency pump including pipework in the base station



The flow temperature is controlled by an injection system using an electric 3-point actuator and a 2-way straight-through valve.

► Observe the enclosed instructions.

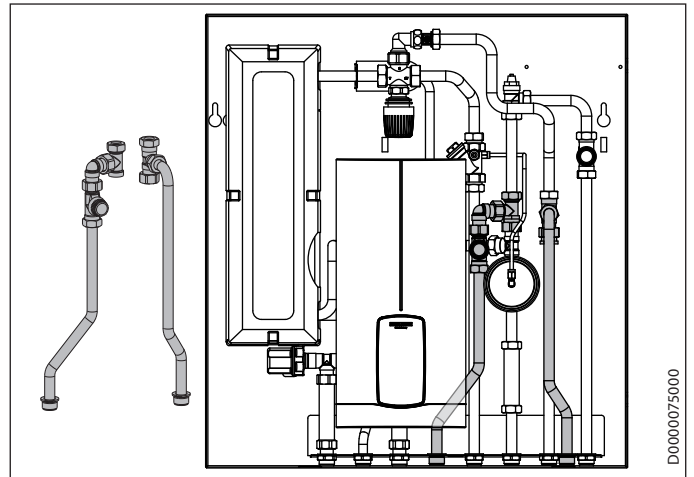
#### Checking / correcting the heating water flow rate

- Ensure heat supply through the central heat generator. The flow temperature should have reached the design value for the network.
- Switch on the pump.
- Perform hydronic balancing of the underfloor heating circuit at the heating circuit distributor according to the design engineer's specifications.
- Do not draw off any DHW while testing the heating water flow rate. Make sure that all thermostatic valves and underfloor heating control valves are fully open.
- After balancing is complete, check the set flow temperature again.

### [2] Heating circuit without mixer | E2-HKU

Heating circuit connection inclusive of pipework in the base station for connecting to a heating circuit without mixer, e.g. radiators.

Shut-off valves and a zone valve for manual adjustment of the heating circuit are integrated. Optional installation of an actuator on the valve is possible.



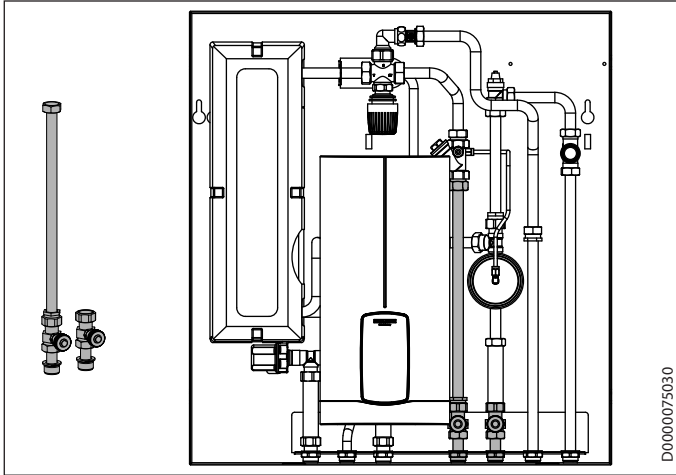
#### [7.1] Pipework thermal insulation | E7-WDR-1

#### [7.2] Pipework thermal insulation | E7-WDR-2

Thermal insulation for the pipework in the apartment module, made of highly flexible insulation material with high resistance to water vapour diffusion and low thermal conductivity

### [8] Drain set E8-ES

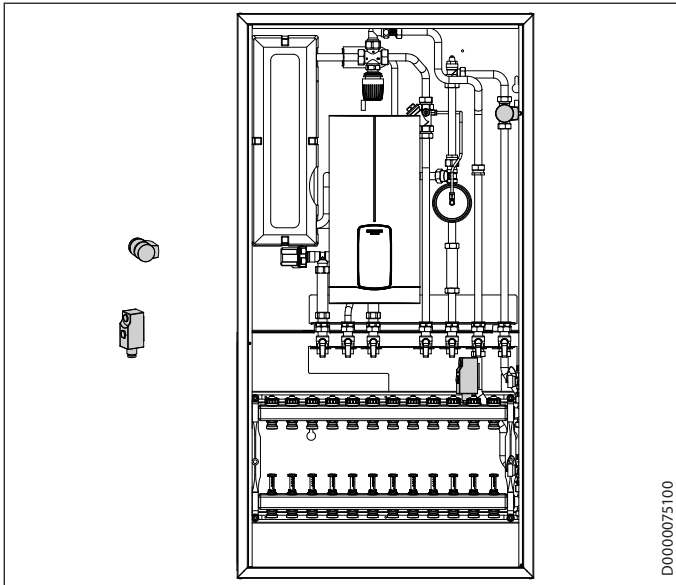
Ball valves with hose connection for draining or venting  
 These can optionally be integrated into the flow or return on the primary side.



### [9] Contact thermostat | E9-ATR

Incl.  
 "GAT/7RC" contact thermostat instructions

Contact thermostat with thermal actuator for sealing off the heating circuit with mixer if set temperature is exceeded



► Observe the enclosed instructions.

## 8.3 Accessories

Accessories for the PROFI SELECT modular system are intended for installation on site and are supplied separately.

Installation of the accessories is described in chapter "Installation".

Designation	Description
-------------	-------------

#### Casing

Z3-GAK-DUO	Casing for finished walls, short, for DUO stations
Z3-GUK-DUO	Casing for unfinished walls, short, for DUO stations
Z3-GAL-DUO	Casing for finished walls, long, for DUO stations
Z3-GUL-DUO	Casing for unfinished walls, long, for DUO stations

#### Mounting rail

Z5-MS-7	Mounting rail
Z5-MS-9	Mounting rail

#### Heating circuit distributor

Z6-HKV-4-DUO	Heating circuit distributor for DUO stations
Z6-HKV-5-DUO	Heating circuit distributor for DUO stations
Z6-HKV-6-DUO	Heating circuit distributor for DUO stations
Z6-HKV-7-DUO	Heating circuit distributor for DUO stations
Z6-HKV-8-DUO	Heating circuit distributor for DUO stations
Z6-HKV-9-DUO	Heating circuit distributor for DUO stations
Z6-HKV-10-DUO	Heating circuit distributor for DUO stations
Z6-HKV-12-DUO	Heating circuit distributor for DUO stations

#### Control unit terminal strip

Z10-RKL	Control unit terminal strip
Z10-RKL2	Control unit terminal strip

### [3.9] Casing for finished walls, short | Z3-GAK-DUO

### [3.11] Casing for finished walls, long | Z3-GAL-DUO

Incl.

- 2 rawl plugs, 2 screws

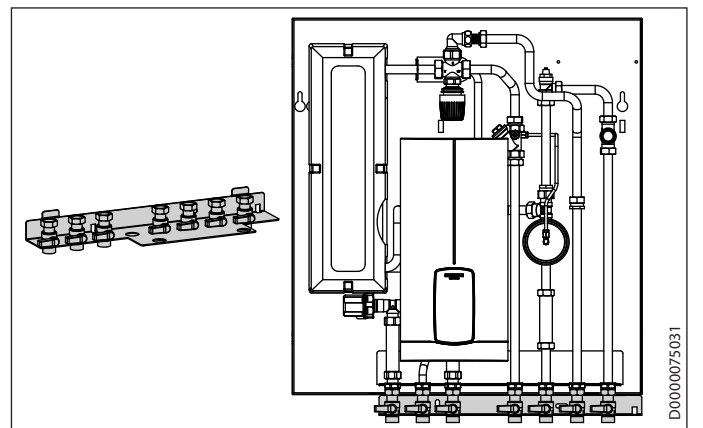
### [3.10] Casing for unfinished walls, short | Z3-GUK-DUO

### [3.12] Casing for unfinished walls, long | Z3-GUL-DUO

### [5.2] Mounting rail | Z5-MS-7

### [5.4] Mounting rail | Z5-MS-9

Fully wired mounting rail with shut-off valve for connecting the apartment module



# INSTALLATION

## PROFI SELECT modular system

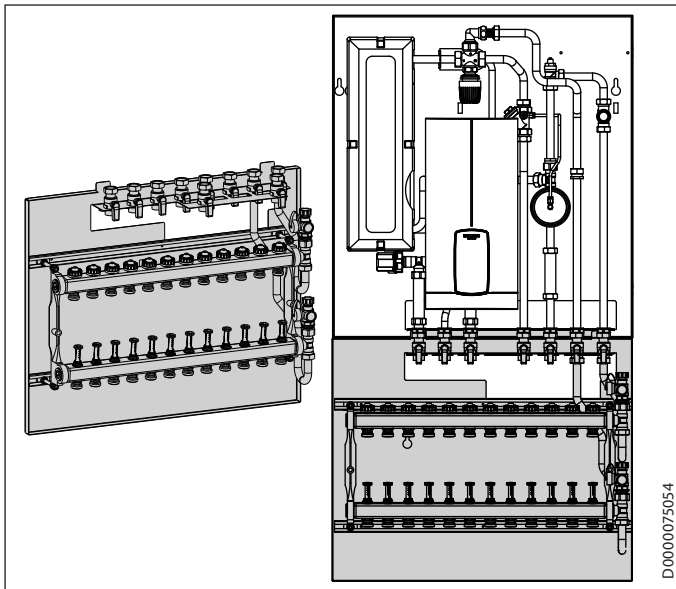


- [6.11] Heating circuit distributor | Z6-HKV-4-DUO
- [6.12] Heating circuit distributor | Z6-HKV-5-DUO
- [6.13] Heating circuit distributor | Z6-HKV-6-DUO
- [6.14] Heating circuit distributor | Z6-HKV-7-DUO
- [6.15] Heating circuit distributor | Z6-HKV-8-DUO
- [6.16] Heating circuit distributor | Z6-HKV-9-DUO
- [6.17] Heating circuit distributor | Z6-HKV-10-DUO
- [6.18] Heating circuit distributor | Z6-HKV-12-DUO

Prefitted heating circuit distributor consisting of stainless steel tubing incl. mounting rail, pressure-tested, mounted on sound-insulated and zinc-plated base plate

In place of the prefitted protective caps, actuators can be attached directly to the integral valves.

Example HKV-9-DUO:



- [10] Controller terminal strip | Z10-RKL
- [10.1] Controller terminal strip | Z10-RKL2

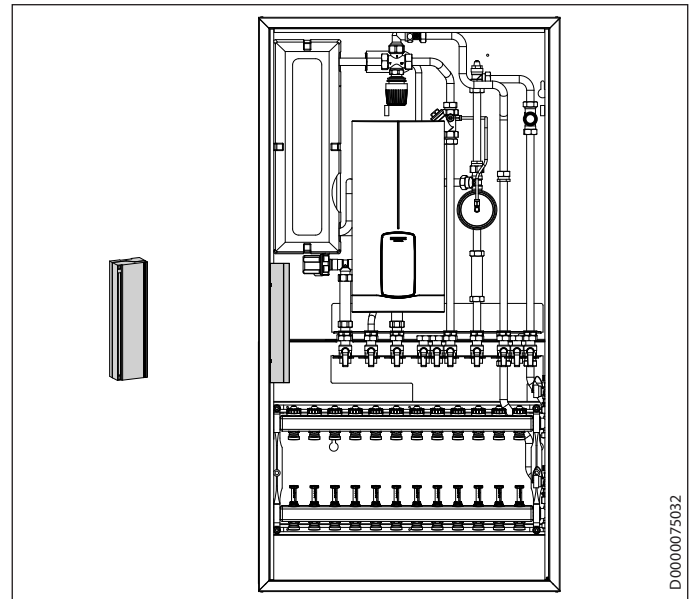
Incl.

"RKL" control distributor installation instructions

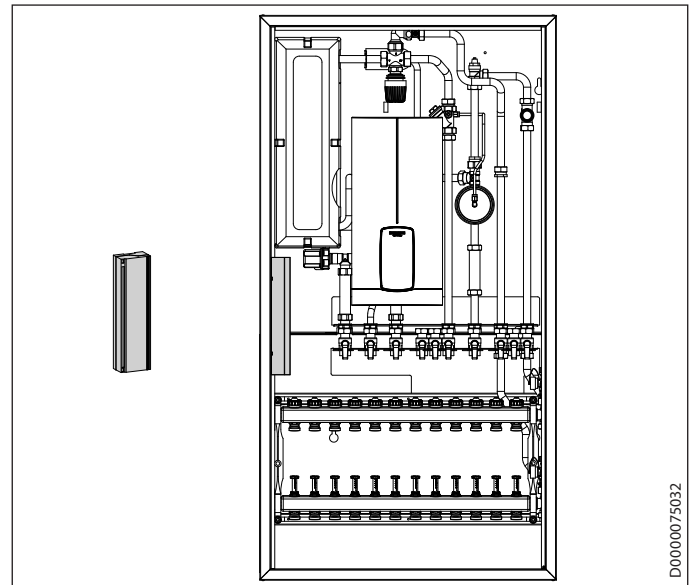
Terminal strip for controller, for wiring actuators and room thermostats

A 230 VAC pump logic module is also integrated that will switch the pump off if necessary.

Z10-RKL:



Z10-RKL 2:



► Observe the enclosed instructions.

### Actuator and room temperature controller

The actuator fitted on the valve for room heating and the temperature controller can be used to set a seven-day program for heating use, for example.

Designation	Part number
<b>Actuator</b>	
EFS	237740
<b>Room temperature controller</b>	
WS-RT 2.0	233757
RTA-S UP	223344
RTA-S2	231061

## 9. Preparation

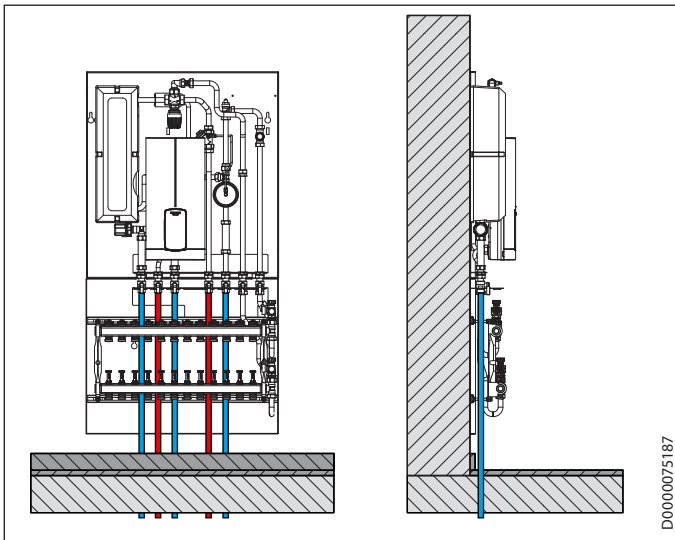
### 9.1 Installation location

- ▶ Install the appliance in a well vented, dry room that is free from the risk of frost.

#### 9.1.1 Routing supply lines

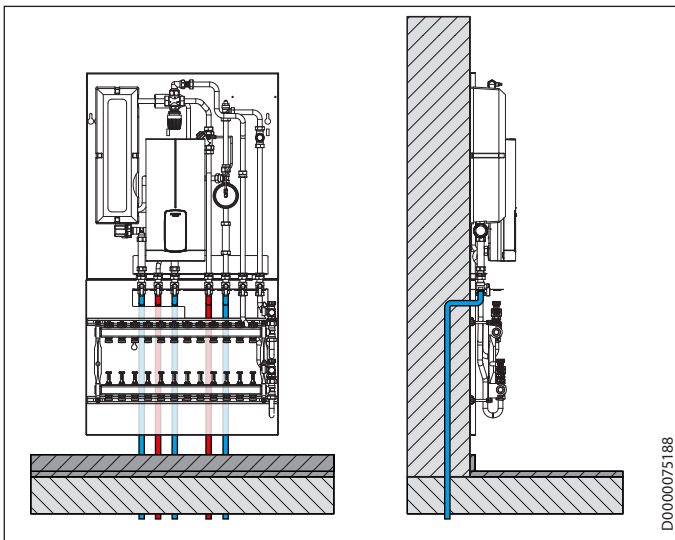
#### 9.1.2 For installation on finished walls

##### Lines routed from below



D0000075187

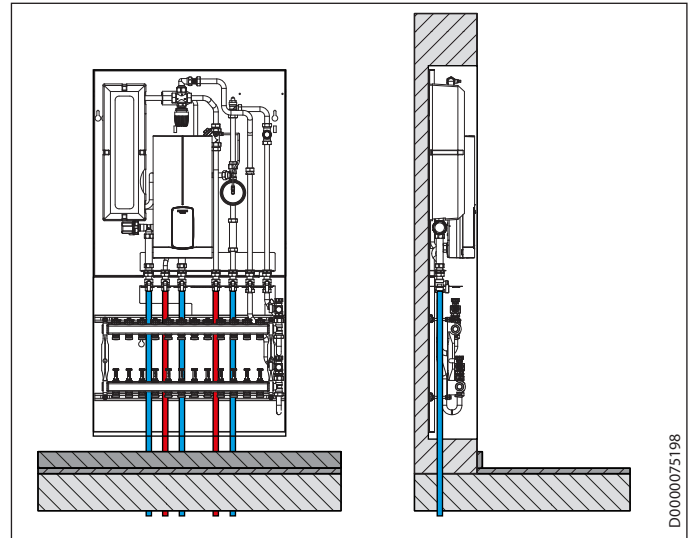
##### Lines routed from behind



D0000075188

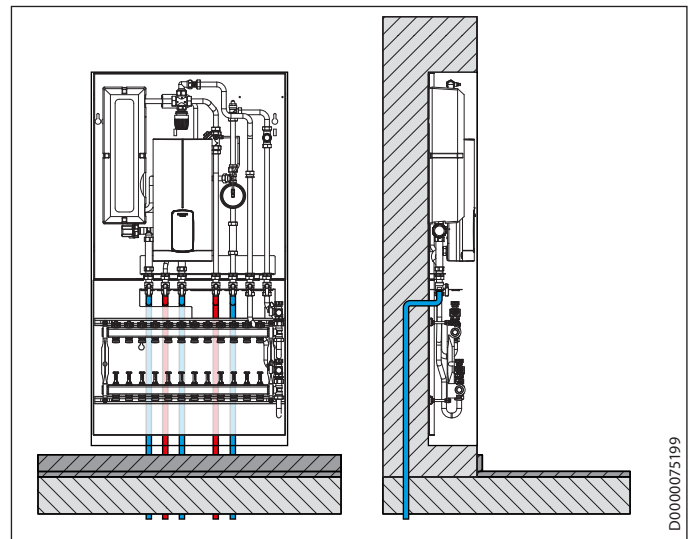
#### 9.1.3 For installation on unfinished walls

##### Lines routed from below



D0000075198

##### Lines routed from behind



D0000075199

### 9.2 Storage

- ▶ Store the appliance in a dry location in its original packaging.
- ▶ We recommend covering the appliance to protect it from dust and dirt.
- ▶ If the appliance is to be stored for an extended period, pumps and actuating devices may have to be moved by hand to prevent seizing of the assemblies.

### 9.3 Transport

- ▶ If possible, transport the appliance in its original packaging.

### 10. Installation



**Material losses**

Only use open-ended spanners of the right size to tighten and release screw connections.

#### 10.1 Appliance installation

- ▶ Only install the appliance after all preparatory installation work has been completed.
- ▶ Select fixing materials in accordance with the wall construction/condition. In case of non-load bearing masonry, mount the appliance on a frame stand.
- ▶ Existing installation ducts and casings for installation on finished or unfinished walls, which are available as installation options or accessories, can be used for wall mounting.

##### 10.1.1 Preparing for installation

- ▶ Connect the appliance to a mounting rail – available as an accessory – or to a heating circuit distributor. Ensure that the tabs on the mounting rail or the heating circuit distributor engage in the recesses on the appliance.
- ▶ Place the flat gasket between the union nuts on the ball valves and the connection threads on the appliance.
- ▶ Tighten the union nuts (for torque see chapter "Specification / Dimensions and connections").

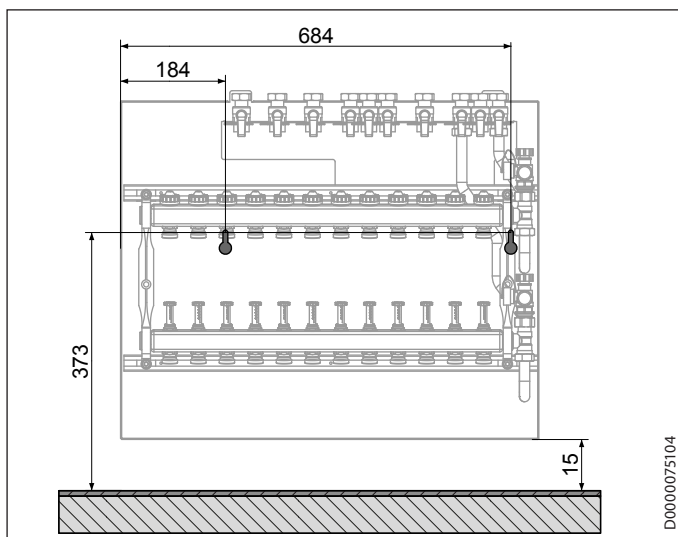


**Note**

Alternatively, you can retrofit the appliance. To eliminate contamination or other problems associated with construction sites, it is sufficient to install only the mounting rail or heating circuit distributor during the construction phase.

##### 10.1.2 Installing the heating circuit distributor on finished walls

Installation dimensions:



The installation dimension "373 mm" refers to the clearance from the floor covering.

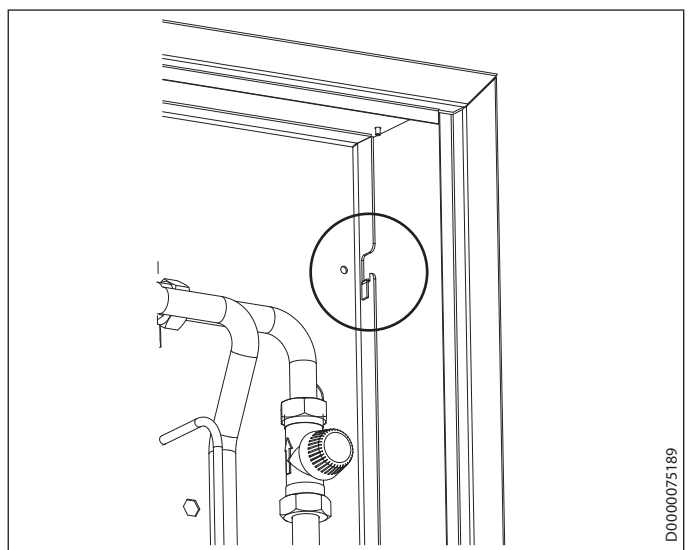
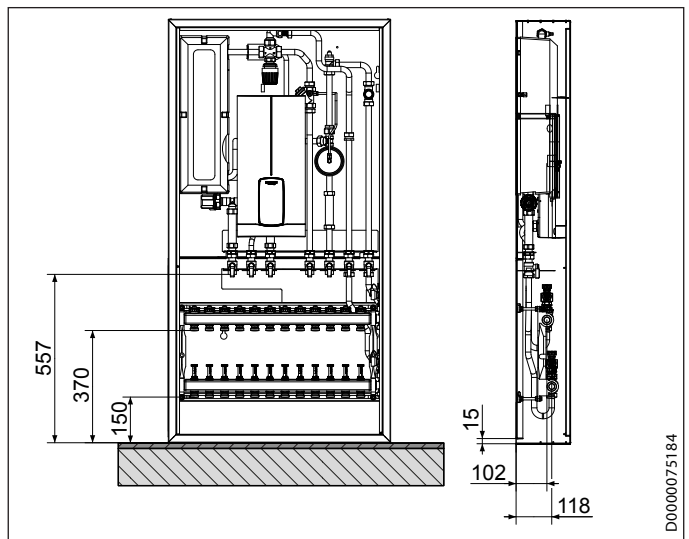
- ▶ Mark out the positions of holes to be drilled for the appliance on the wall (see chapter "Specification / Dimensions and connections").
- ▶ Mount the appliance on the wall using the enclosed rawl plugs and screws.
- ▶ Tighten the screw connection between the appliance and the mounting rail or heating circuit distributor (for torque, see chapter "Specification / Dimensions and connections").
- ▶ Connect the mounting rail or heating circuit distributor to the pipework with flat gaskets.

##### 10.1.3 Installing the casing for finished walls



**Note**

When positioning the heat interface unit, ensure that the casing is flush with the finished floor.



- ▶ Guide the recesses in the casing for finished walls – available as an installation option or accessory – into the hooks at the side of the mounting plate for the appliance from above.



### Removing the casing door

- ▶ Open the latch of the casing door.
- ▶ Tilt the casing door forwards. Lift the rebate of the casing door from the frame.

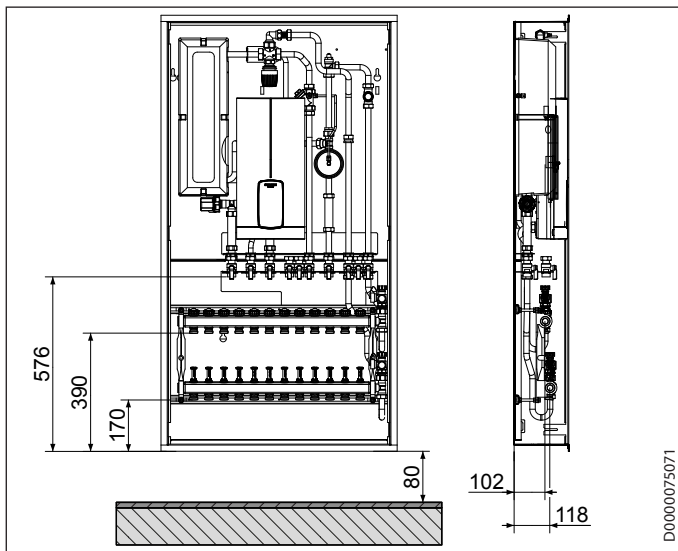
### 10.1.4 Installation on unfinished walls

The casing for unfinished walls – available as an accessory – is set into the wall. The appliance is installed in the casing after it has been plastered in.

### Removing the casing door and frame

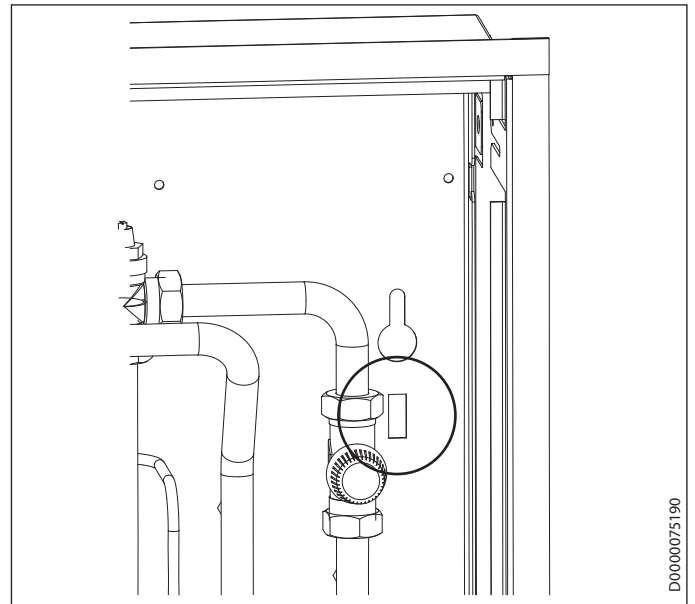
- ▶ Open the latch of the casing door.
- ▶ Tilt the casing door forwards. Lift the rebate of the casing door from the frame.
- ▶ Undo the four screws inside the corners of the casing for unfinished walls.
- ▶ Remove the frame.

### Installing the casing for unfinished walls



The minimum clearance (80 mm) refers to the clearance from the floor covering, allowing for any skirting boards. If no skirting boards or narrower ones will be used, the clearance can be reduced to a minimum of 20 mm.

- ▶ Create a wall recess with the specified dimensions (see chapter "Specification / Dimensions and connections").
- ▶ Set the casing for unfinished walls into the wall recess.
- ▶ Secure the casing for unfinished walls using suitable screws (not part of the standard delivery). If setting the casing for unfinished walls into a drywall, the fixing tabs of the casing can be used as installation aids.
- ▶ Align the casing.



- ▶ Guide the appliance onto the hooks in the casing. Use the rectangular recesses.
- ▶ Tighten the screw connection between the appliance and the mounting rail or heating circuit distributor (for torque, see chapter "Specification / Dimensions and connections").
- ▶ Connect the mounting rail or heating circuit distributor to the pipework with flat gaskets.

## 10.2 Water connection



### Material losses

Dirt and sludge can accumulate in the appliance and cause overheating, noise, corrosion and faults in the appliance.

- ▶ Thoroughly flush the heating system before connection.

- ▶ Route the pipework up to the appliance.
- ▶ Connect the pipework to the shut-off valve of the appliance ensuring that it is stress-free.
- ▶ Check the correct position of the shut-off valves.

## 10.3 Electrical connection



### WARNING Electrocutation

Before any work on the appliance, ensure omnipolar disconnection from the power supply.



### Note

Observe the operating and installation instructions for the integral instantaneous water heater.

- ▶ Route the electrical connections into the appliance.
- ▶ Incorporate the appliance in the equipotential bonding. Use the connection at the bottom left-hand section of the mounting plate (min. 6 mm<sup>2</sup> CU).



### 10.4 Completing the installation

#### 10.4.1 Installation on finished walls

- ▶ Fit the casing door in reverse order to its removal.

#### 10.4.2 Installation on unfinished walls

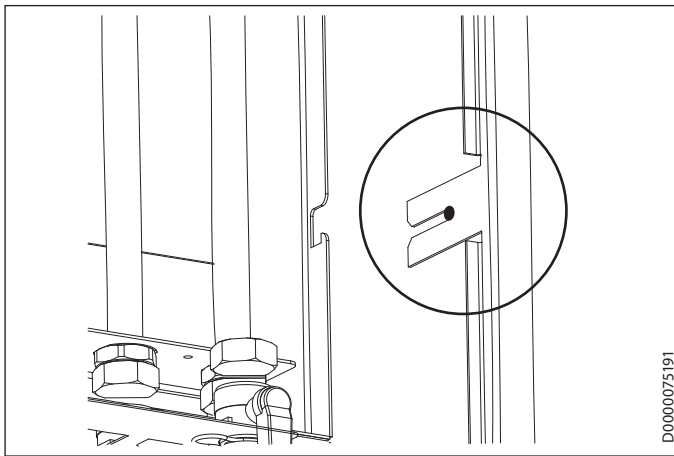


##### Material losses

Incorrect installation can lead to flames and smoke spreading through the supply duct in case of a fire.

- ▶ Observe the fire regulations.
- ▶ Insulate the wall recess correctly.

- ▶ Close off/plaster the wall recess.



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- ▶ Place the frame on the casing for unfinished walls so that the 4 fixing tabs are located on the screws. Tighten the screws.
- ▶ Fit the casing door in reverse order to its removal. Ensure you insert the rebate of the casing door into the frame.

## 11. Commissioning

- ▶ Check the pipework and connections for leaks.
- ▶ Visually inspect the appliance for leaks.
- ▶ Open the shut-off valves.

#### Venting the DHW pipework

- ▶ Open a nearby DHW draw-off point until the pipework is free from air.

#### Filling and venting the heating system



##### WARNING Electrocutation

Protect the electronics of the integral instantaneous water heater from escaping water.

- ▶ Fill and vent the central heating system according to the heat generator operating and installation instructions.
- ▶ Open the thermostatic valves of the connected radiators.
- ▶ Draw off hot water to make water flow through the heat exchanger.
- ▶ Open the air vent screw (see chapter "Settings") until water runs out.
- ▶ Bleed the connected radiators.

#### Checking/correcting the heating water flow rate for a heating circuit with mixer

- ▶ Ensure heat supply through the central heat generator. The flow temperature should have reached the design value for the network.
- ▶ Set the temperature controller to the required flow temperature at the control valve.
- ▶ Switch on the pump.
- ▶ Perform hydronic balancing of the underfloor heating circuit at the heating circuit distributor according to the design engineer's specifications.
- ▶ Do not draw off any DHW while testing the heating water flow rate. Make sure that all thermostatic valves and underfloor heating control valves are fully open.
- ▶ After balancing is complete, check the set flow temperature again.

#### Checking the appliance

- ▶ Check the appliance function.

## 12. Settings



### Note

The required settings for the installation options are described in chapter "Installation options".

### DHW heating: Checking the outlet temperature / adjusting the temperature controller

- ▶ Open a DHW draw-off point until approx. 8 l/min of hot water runs out. Set the temperature controller for DHW heating to position 5-6.
- ▶ Measure the temperature of the water running out. If the outlet temperature is approx. 38 °C, the setting can be left as it is. If the temperature is significantly higher or lower, adjust the temperature controller accordingly. The setting range is approx. 30-55 °C.

## 13. Appliance handover

- ▶ Explain the appliance function to users and familiarise them with its operation.
- ▶ Make users aware of potential dangers.
- ▶ Recommend taking out a maintenance contract.
- ▶ Hand over these instructions.

## 14. Maintenance



### WARNING Electrocutation

Always isolate the appliance from the power supply when performing maintenance work, using an isolator with a contact opening of at least 3 mm.

- ▶ Remove the casing door.
- ▶ Shut off the heating flow, heating return and the cold water supply.
- ▶ Clean the strainer in the dirt filter.
- ▶ Visually inspect the appliance for leaks.

### Completing maintenance work

- ▶ Open the shut-off valves required for operation.
- ▶ Check the condition of the appliance and clean off any external dirt.
- ▶ If necessary, vent the heating system.
- ▶ Check the appliance function.
- ▶ Check the appliance for leaks.
- ▶ Refit the casing door.
- ▶ Log the inspection/maintenance work performed.

## 15. Troubleshooting

Problem	Cause	Remedy
DHW and radiators do not heat up.	Shut-off valves are closed.	Check that all shut-off valves in the appliance are open.
	The strainer in the dirt filter is contaminated.	Check that the strainer in the dirt filter is free from contamination.
	The heat exchanger is blocked.	Check whether the heat exchanger is blocked. Replace or clean it with suitable cleaning agents.
DHW intermittently does not heat up.	The central heating pump rating is incorrect.	Check the rating of the central heating pump.
	The flow rate of the heating system is incorrectly set.	Check the flow rate.
	The start time of the heating system is incorrectly set.	Check the start time of the central heating system.
Radiators do not heat up.	The valve for room heating is closed.	Check and, if necessary, correct the settings at the room temperature controller.
Radiators do not heat up.	The valve for room heating is closed.	Check and, if necessary, correct the settings at the room temperature controller.



## 16. Specification

### 16.1 Dimensions and connections

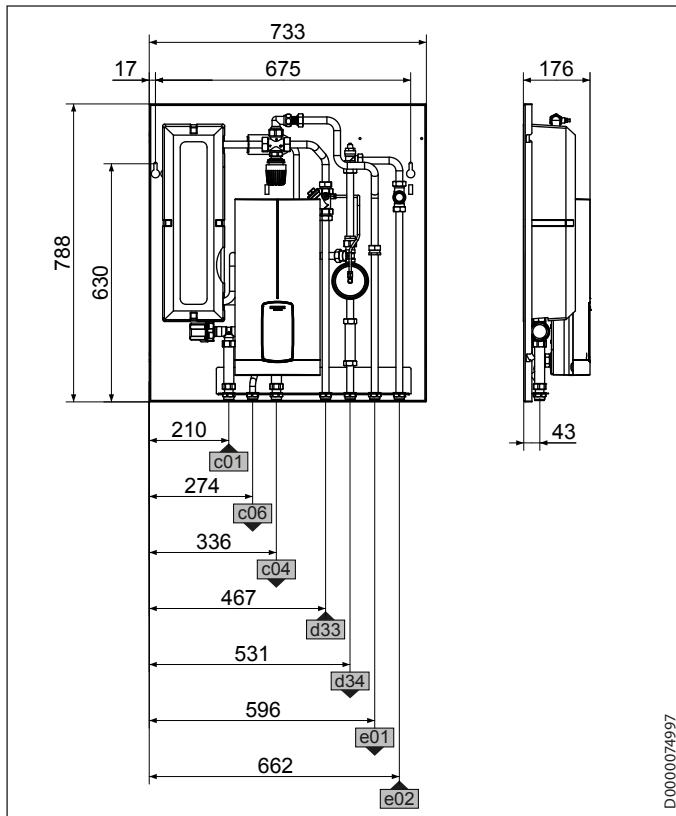


**Note**

Depending on the range of functions, a mounting rail or heating circuit distributor will be required to connect the base station.

- ▶ The screw connection torque of the mounting rail or the heating circuit distributor should be 35 Nm.

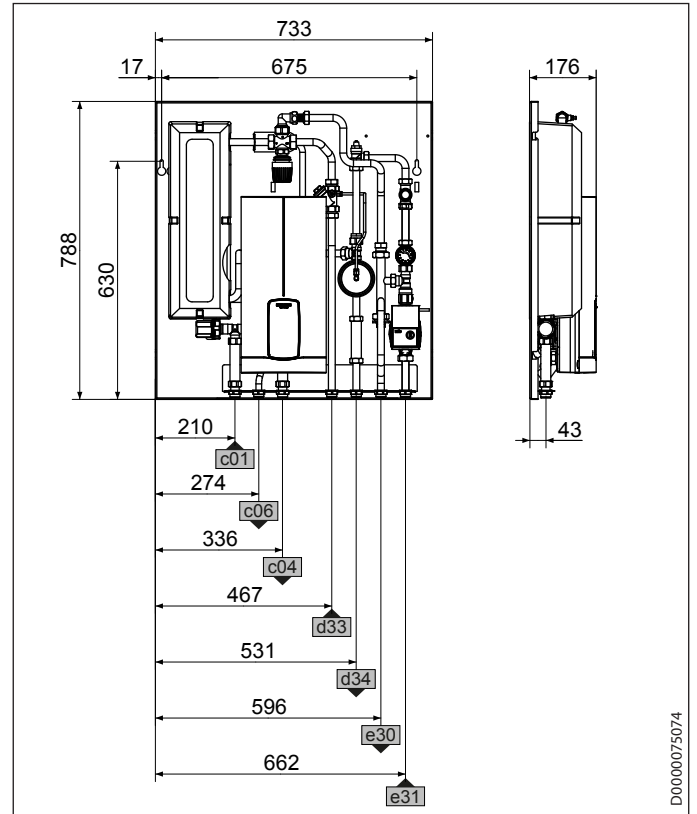
#### WSP-2-DUO for DHW and heating circuit without mixer



			WSP-2-DUO	WSG-2-DUO
c01	Cold water inlet	Male thread	G 3/4	G 3/4
c04	Cold water outlet	Male thread	G 3/4	G 3/4
c06	DHW outlet	Male thread	G 3/4	G 3/4
d33	Heat source flow	Male thread	G 3/4	G 3/4
d34	Heat source return	Male thread	G 3/4	G 3/4
e01	Heating flow	Male thread	G 3/4	G 3/4
e02	Heating return	Male thread	G 3/4	G 3/4

#### WSP-2-DUO for DHW and heating circuit with mixer

##### [1.1] Heating circuit with mixer, thermostatically controlled | E1-HKT

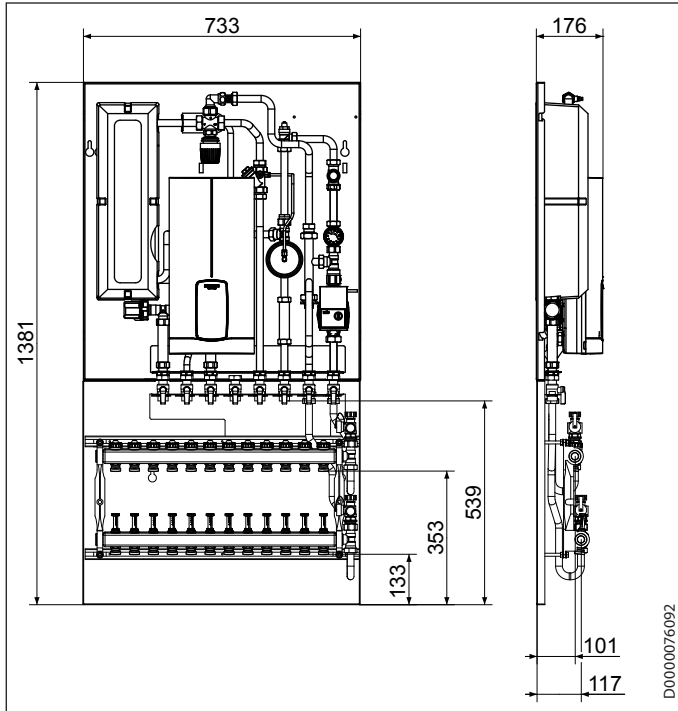


			WSP-2-DUO/HKT
c01	Cold water inlet	Male thread	G 3/4
c04	Cold water outlet	Male thread	G 3/4
c06	DHW outlet	Male thread	G 3/4
d33	Heat source flow	Male thread	G 3/4
d34	Heat source return	Male thread	G 3/4
e30	Heating flow, mixed	Male thread	G 3/4
e31	Heating return, mixed	Male thread	G 3/4

## WSP-2-DUO for DHW with heating circuit with mixer and heating circuit distributor

[1.1] Heating circuit with mixer, thermostatically controlled | E1-HKT

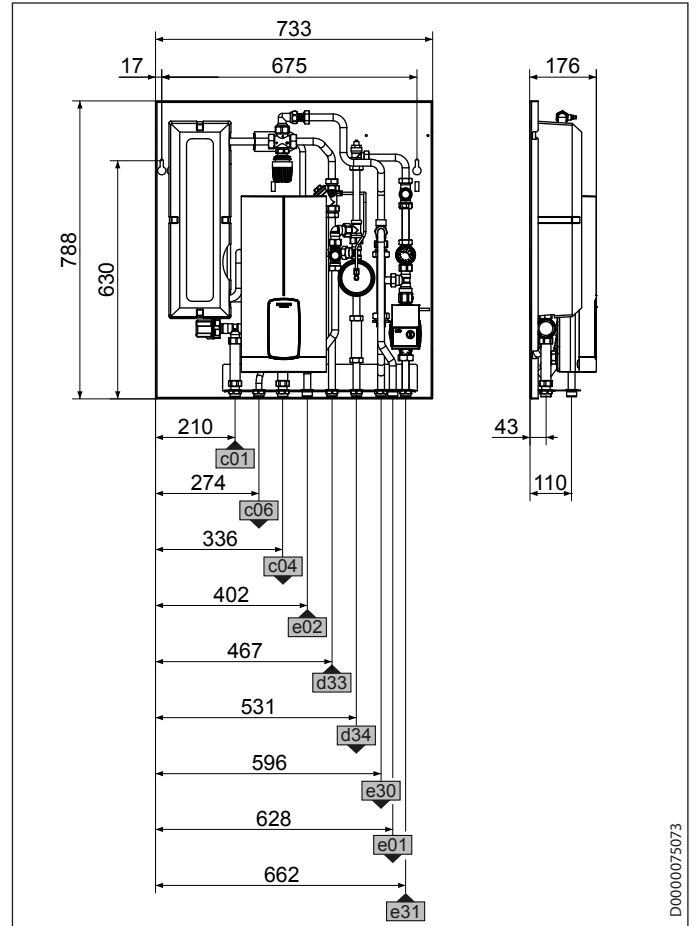
[6.11] Heating circuit distributor | Z6-HKV



## WSP-2-DUO for DHW with heating circuit with mixer and heating circuit without mixer

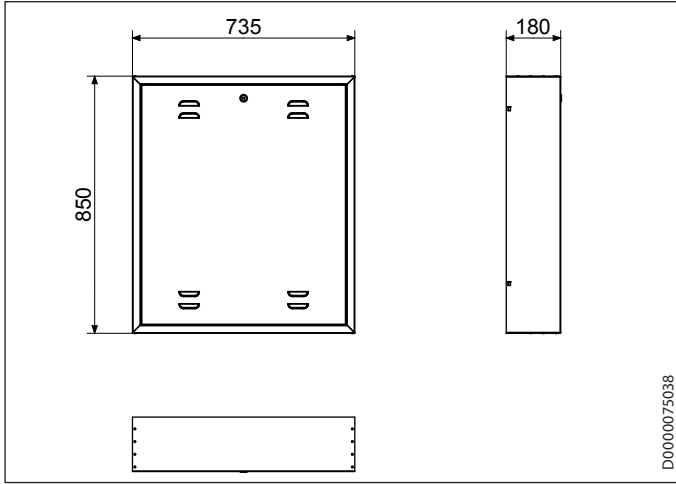
[1.1] Heating circuit with mixer, thermostatically controlled | E1-HKT

[2] Heating circuit without mixer | E2-HKU

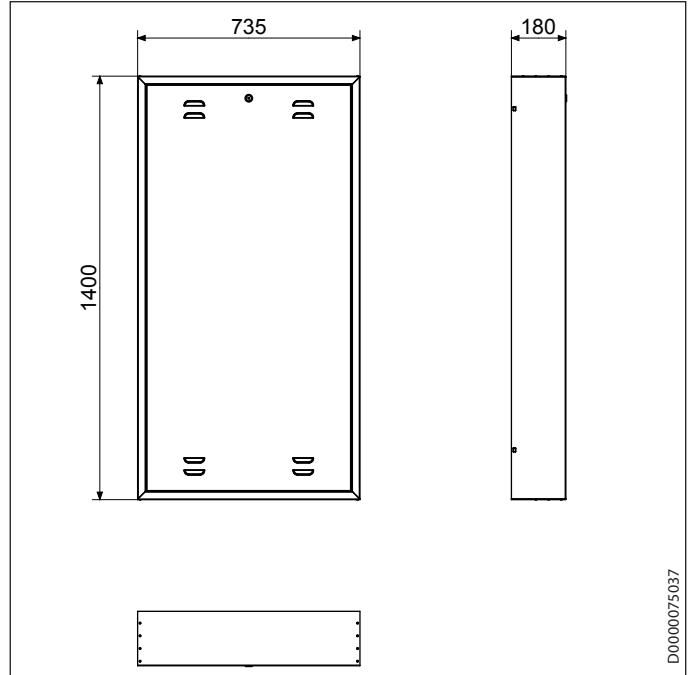


		WSP-2-DUO/HKT/HKU
c01	Cold water inlet	Male thread G 3/4
c04	Cold water outlet	Male thread G 3/4
c06	DHW outlet	Male thread G 3/4
d33	Heat source flow	Male thread G 3/4
d34	Heat source return	Male thread G 3/4
e01	Heating flow	Male thread G 3/4
e02	Heating return	Male thread G 3/4
e30	Heating flow, mixed	Male thread G 3/4
e31	Heating return, mixed	Male thread G 3/4

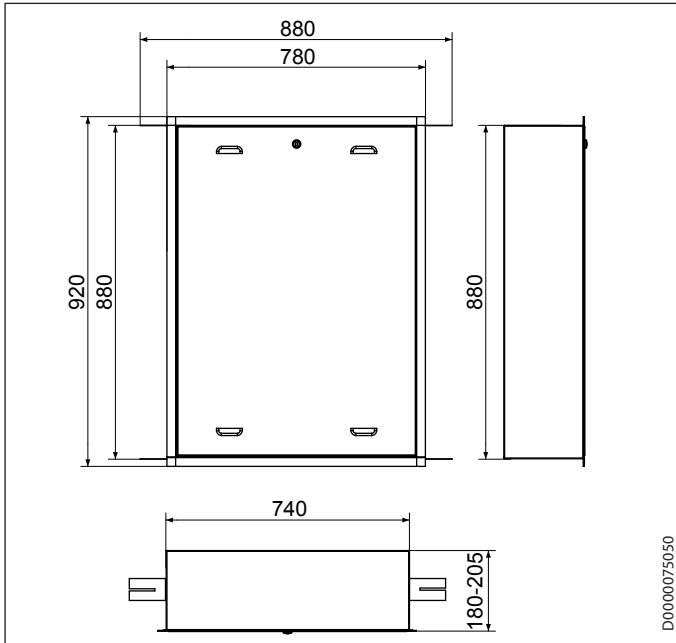
**[3.9] Casing for finished walls, short | Z3-GAK-DUO**



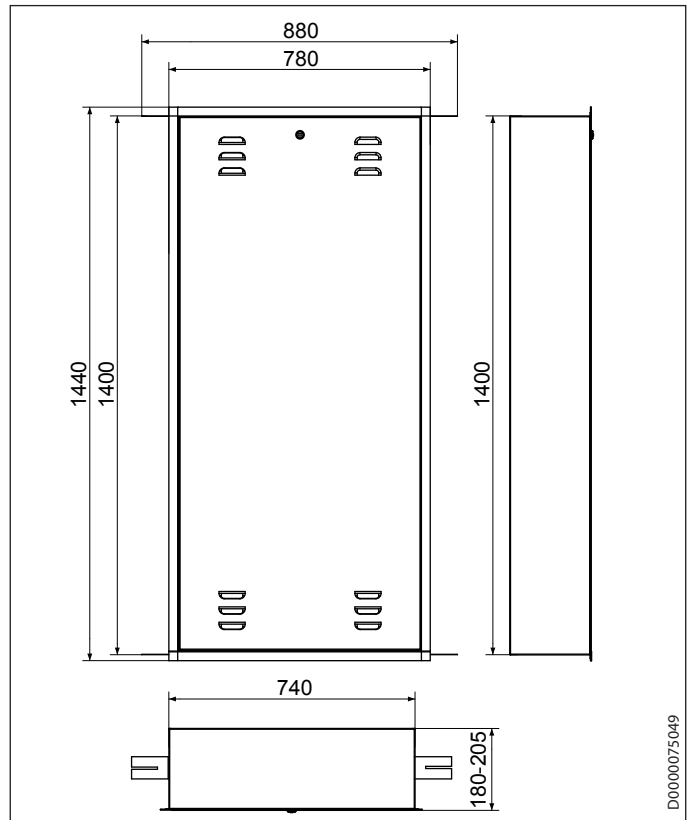
**[3.11] Casing for finished walls, long | Z3-GAL-DUO**



**[3.10] Casing for unfinished walls, short | Z3-GUK-DUO**

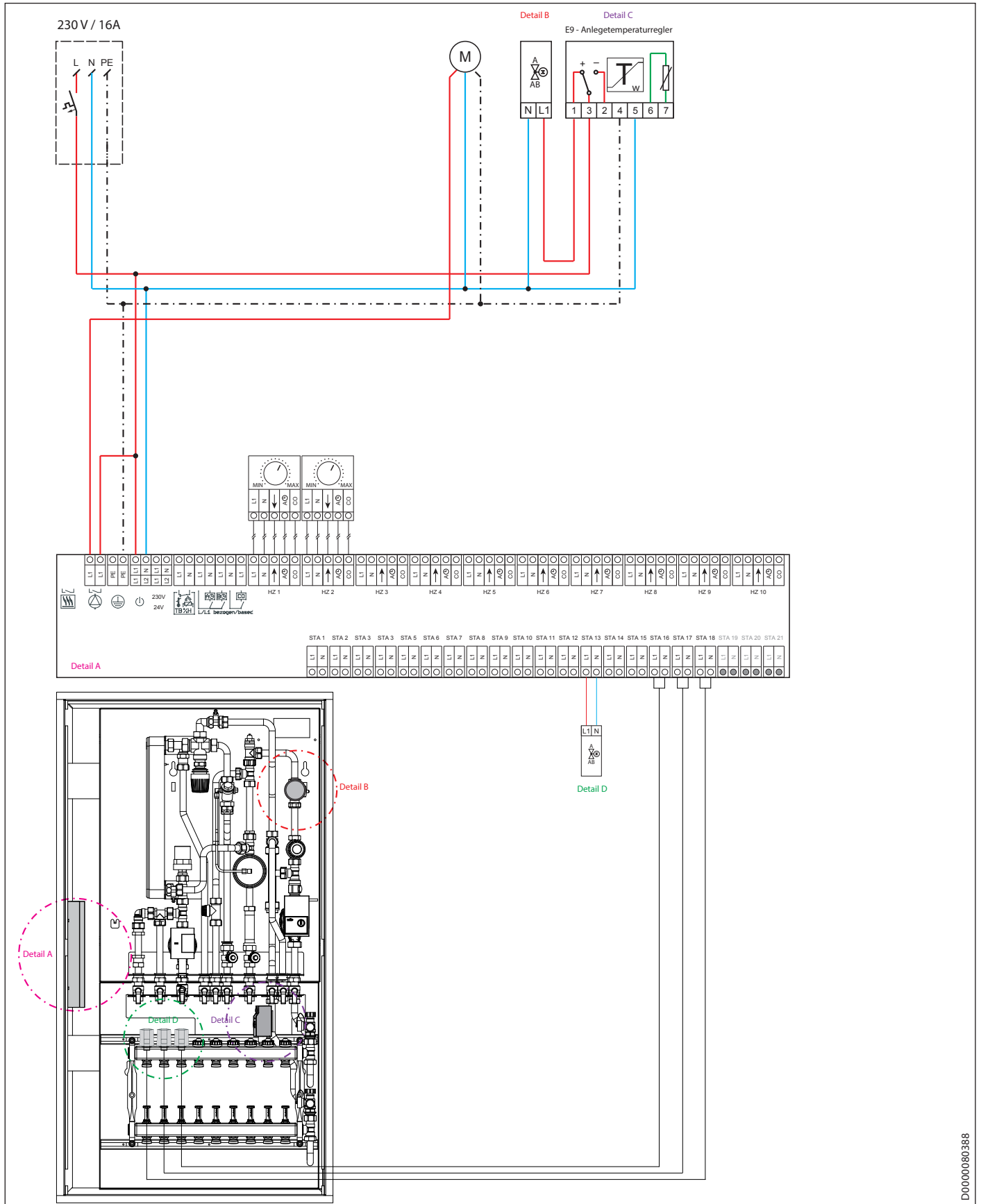


**[3.12] Casing for unfinished walls, long | Z3-GUL-DUO**



## 16.2 Wiring diagrams

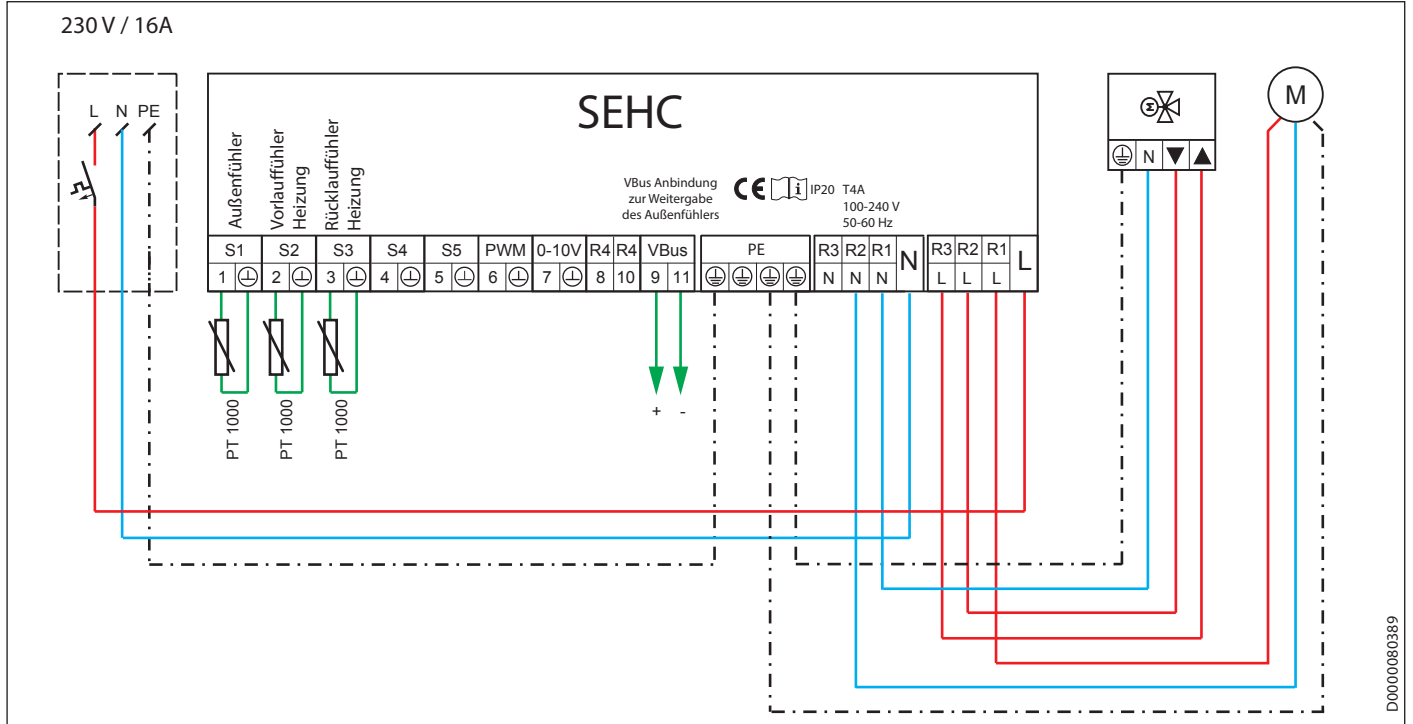
### Thermostatically controlled heating circuit with controller terminal strip, contact thermostat and actuators (E1-HKT, E9-ATR, Z10-RKL, EFS)



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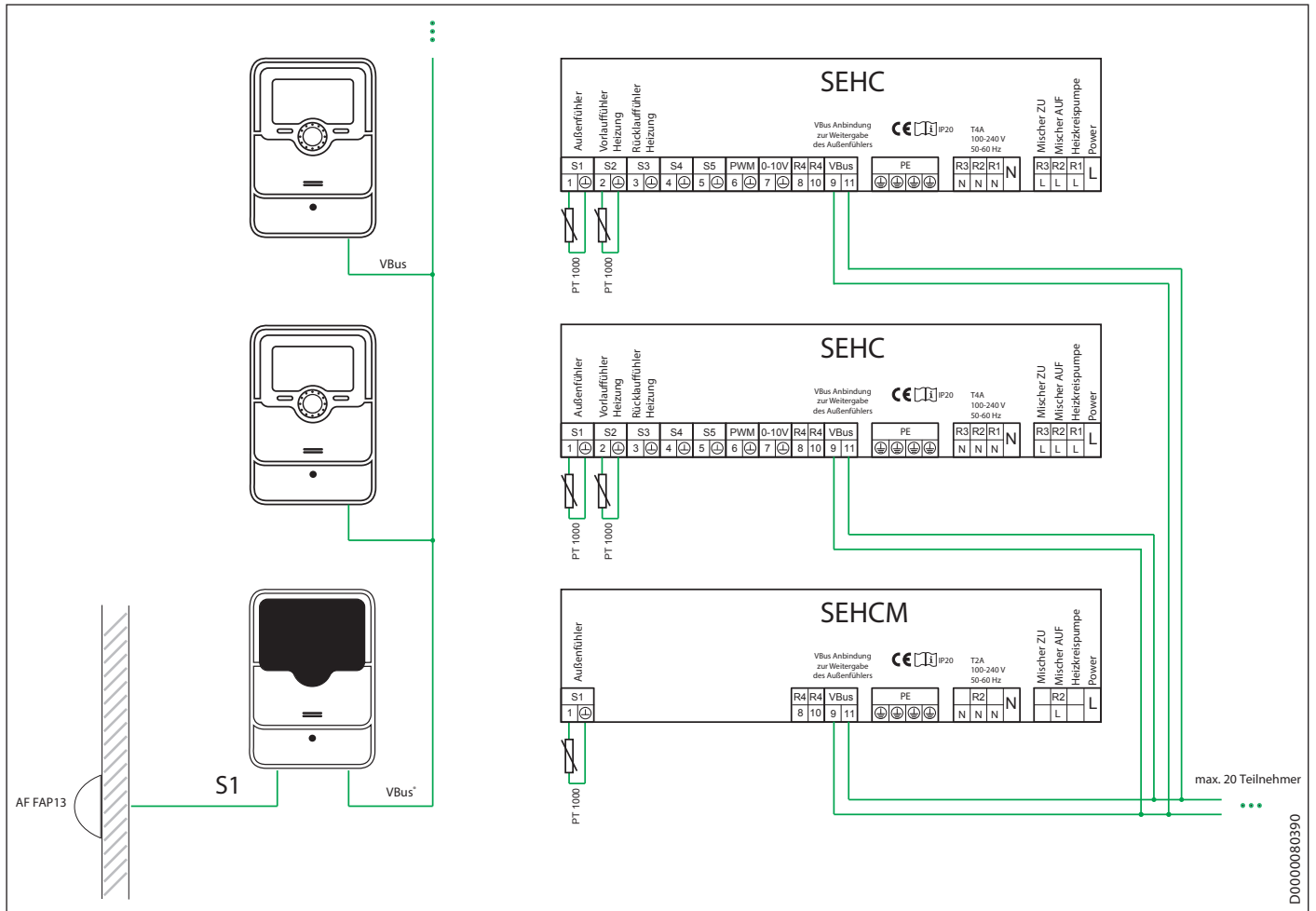


## SEHC control unit (electronically controlled heating circuit E1-HKE)

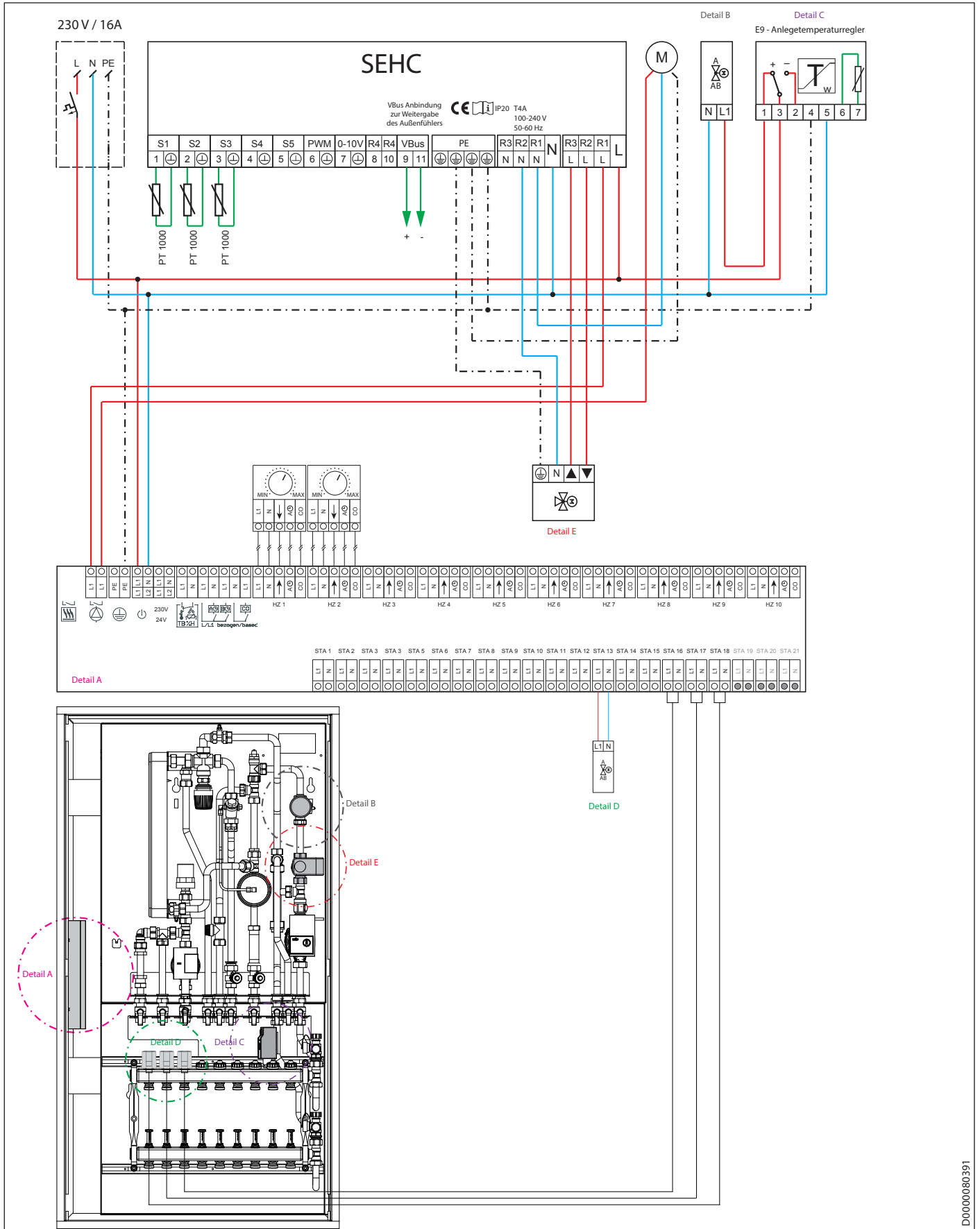


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## Master/slave connection SEHC with SEHCM (electronically controlled heating circuit E1-HKE with SEHCM)



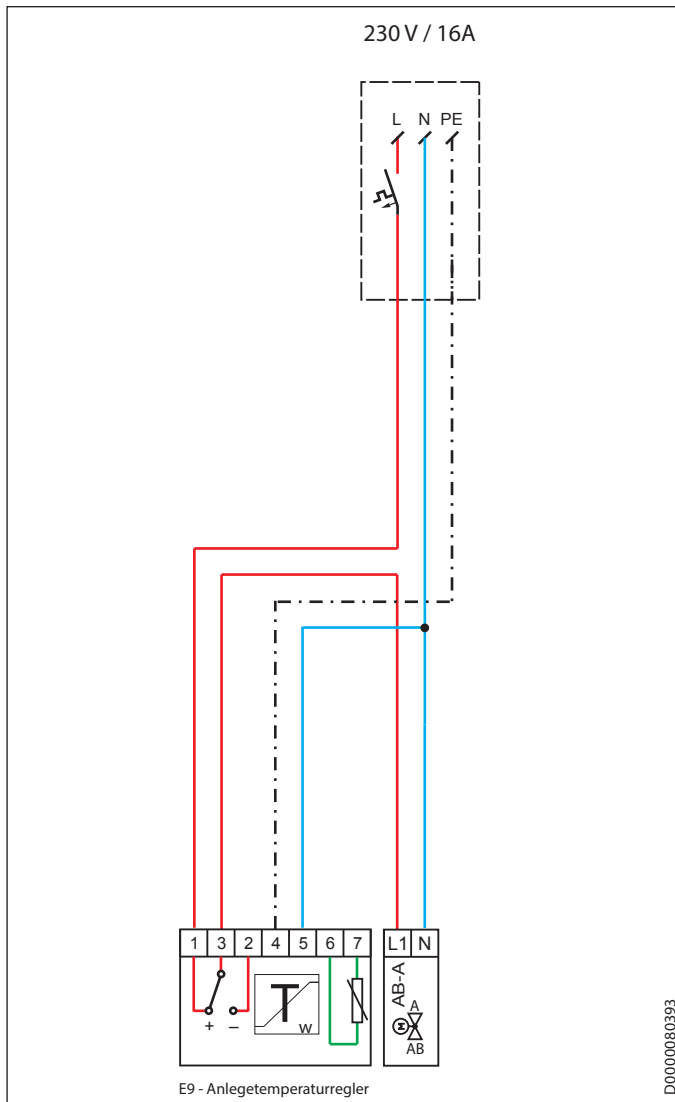
## Electronically controlled heating circuit with controller terminal strip, contact thermostat and actuators (E1-HKE, E9-ATR, Z10-RKL, EFS)



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## Contact thermostat (E9-ATR)



## 16.3 Data tables

### WSP-2-DUO | WSG-2-DUO

		WSP-2-DUO 238133	WSG-2-DUO 238134
<b>Hydraulic data</b>			
Output on the primary side	kW	31	31
Max. flow rate on primary side, incl. differential pressure controller and heat meter at dp = 600 hPa	l/h	1300	1300
Output on the secondary side (at 10 K)	kW	12	12
Draw-off rate at secondary 10/48 °C	l/min	14.5	14.5
Draw-off rate at secondary 10/38 °C	l/min	16	16
Draw-off rate at secondary 38/60 °C	l/min	7	7
Draw-off rate at secondary 38/44 °C	l/min	16	16
Max. flow rate on the secondary side, at 100 hPa differential pressure	l/h	1000	1000
Pressure drop on the DHW side without flow limiter	hPa	1600	1600
Design temperature on the primary side	°C	43	43
<b>Electrical data</b>			
Output on the DHW side without instantaneous water heater	kW	31	31
Instantaneous water heater rated output	kW	11	11
Instantaneous water heater rated voltage	V	400	400
Instantaneous water heater phases		3/PE	3/PE
Instantaneous water heater frequency	Hz	50	50
Instantaneous water heater fuse protection	A	16	16
<b>Application limits</b>			
Application limit, conductivity, heat exchanger	µS/cm	< 500	> 500
Max. permissible temperature	°C	60	60
Max. permissible pressure	MPa	1.0	1.0
Max. DHW temperature in instantaneous water heating mode	°C	60	60
<b>Versions</b>			
Material of plate heat exchanger		Stainless steel (copper-soldered)	Stainless steel (soldered)
IP rating		IP25	IP25
<b>Connections</b>			
Connection		G 3/4	G 3/4
Alignment of connections		Bottom	Bottom
<b>Dimensions</b>			
Height	mm	780	780
Width	mm	735	735
Depth	mm	180	180
<b>Weights</b>			
Weight	kg	32	32

## Application limits

### WSP-2-DUO | WSG-2-DUO

Flow temperature	°C	40						40											
DHW temperature	°C	38						38											
Cold water temp.	°C	6						7											
DHW l/min	l/min	7	9	10	12	13	16	7	9	10	12	13	16	7	9	10	12	13	16
Return temperature	°C	21.35	22.78	23.42				21.66	23.03	23.65				21.97	23.29	23.89			
Spread		18.65	17.22	16.58				18.34	19.97	16.35				18.03	16.71	16.11			
kg/h primary		724	1005	1163				713	990	1145				702	972	1124			

### WSP-2-DUO | WSG-2-DUO

Flow temperature	°C	40						40											
DHW temperature	°C	38						38											
Cold water temp.	°C	9						10											
DHW l/min	l/min	7	9	10	12	13	16	7	9	10	12	13	16						
Return temperature	°C	22.29	23.57	24.14				22.62	23.85	24.40									
Spread		17.71	16.43	15.86				17.38	16.15	15.60									
kg/h primary		692	954	1102				681	936	1080									

### WSP-2-DUO | WSG-2-DUO

Flow temperature	°C	43						43											
DHW temperature	°C	38						38											
Cold water temp.	°C	6						7											
DHW l/min	l/min	7	9	10	12	13	16	7	9	10	12	13	16	7	9	10	12	13	16
Return temperature	°C	16.23	17.48	18.05	19.06	19.55		16.69	17.89	18.43	19.41	19.87		17.16	18.31	18.84	19.78	20.22	
Spread		26.77	25.52	24.95	23.94	23.45		26.31	25.11	24.57	23.59	23.13		25.84	24.69	24.16	23.22	22.78	
kg/h primary		504	677	771	965	1070		497	666	760	947	1048		490	656	749	933	1030	

### WSP-2-DUO | WSG-2-DUO

Flow temperature	°C	43						43											
DHW temperature	°C	38						38											
Cold water temp.	°C	9						10											
DHW l/min	l/min	7	9	10	12	13	16	7	9	10	12	13	16						
Return temperature	°C	17.63	18.73	19.24	20.14	20.57		18.12	19.17	19.66	20.52	20.93	22.03						
Spread		25.37	24.27	23.76	22.86	22.43		24.88	23.83	23.34	22.48	22.07	20.97						
kg/h primary		483	645	735	915	1012		476	634	724	897	994	1286						

## Installation options

### [1.1] Heating circuit with mixer, thermostatically controlled | E1-HKT

		E1-HKT
		234667
Control range	°C	20-50
Max. flow rate heating at 200 hPa differential pressure	m <sup>3</sup> /h	2.7
Max. flow rate heating at 250 hPa differential pressure	m <sup>3</sup> /h	2.4
Max. flow rate heating at 300 hPa differential pressure	m <sup>3</sup> /h	2.0
Circulation pump type		Yonos Para RS 15/6
Suitable for		WSP-1...WSP-3   WSG-1...WSG-3

### [1.2] Heating circuit with mixer, electrically controlled | E1-HKE

		E1-HKE
		234668
Control range	°C	20 to 3 K at max. flow temperature
Max. flow rate heating at 200 hPa differential pressure	m <sup>3</sup> /h	2.7
Max. flow rate heating at 250 hPa differential pressure	m <sup>3</sup> /h	2.4
Max. flow rate heating at 300 hPa differential pressure	m <sup>3</sup> /h	2.0
Circulation pump type		Yonos Para RS 15/6
Suitable for		WSP-1...WSP-3   WSG-1...WSG-3

### [2] Heating circuit without mixer | E2-HKU

		E2-HKU
		234669
Suitable for		WSP-1...WSP-3   WSG-1...WSG-3
Max. flow rate heating at 100 hPa differential pressure	m <sup>3</sup> /h	0.5

### Accessories: Casing for installation on finished walls

		Z3-GAK-DUO	Z3-GAL-DUO
		238483	238485
Casing height, finished walls	mm	850	1400
Casing width, finished walls	mm	735	735
Casing depth, finished walls	mm	180	180
Weight	kg	13	22
Colour		White (similar to RAL 9010)	White (similar to RAL 9010)

### Accessories: Casing for installation on unfinished walls

		Z3-GUK-DUO	Z3-GUL-DUO
		238484	238486
Suitable for		WSP-   WSG-DUO	WSP-   WSG-DUO
Casing height, unfinished walls	mm	880	1400
Casing width, unfinished walls	mm	740	740
Casing depth, unfinished walls	mm	180...205	180...205
Frame width	mm	780	780
Frame height	mm	920	1440
Weight	kg	12.5	20.5
Colour		White, RAL 9010	White (similar to RAL 9010)



## Guarantee

The guarantee conditions of our German companies do not apply to appliances acquired outside of Germany. In countries where our subsidiaries sell our products a guarantee can only be issued by those subsidiaries. Such guarantee is only granted if the subsidiary has issued its own terms of guarantee. No other guarantee will be granted.

We shall not provide any guarantee for appliances acquired in countries where we have no subsidiary to sell our products. This will not affect warranties issued by any importers.

## Environment and recycling

We would ask you to help protect the environment. After use, dispose of the various materials in accordance with national regulations.



NOTES





STIEBEL ELTRON GmbH & Co. KG  
Dr.-Stiebel-Str. 33 | 37603 Holzminden  
Tel. 05531 702-0 | Fax 05531 702-480  
info@stiebel-eltron.de  
www.stiebel-eltron.de

tecalor GmbH  
Lüchtringer Weg 3 | 37603 Holzminden  
Tel. 05531 99068-95700 | Fax 05531 99068-95712  
info@tecalor.de  
www.tecalor.de



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Stand 9168

A 330929-41142-9440  
B 328454-41142-9440